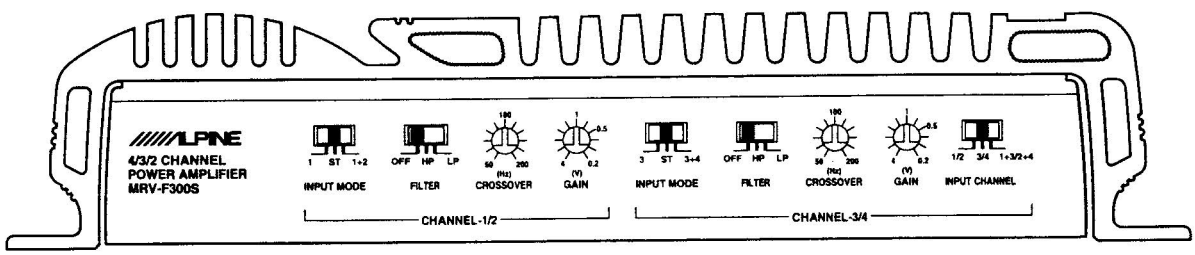
ALPINE®

SERVICE MANUAL

4/3/2 Channel Power Amplifier



サービス費用区分	B
技 術 資 料 No.	PM-61-O

578

MRV-F300S

Contents

Specifications 2
Adjustment Procedures 3
Block Diagram 4
Parts Layout on P.C.Boards and Wiring Diagram ..... 5 to 7
Schematic Diagram ..... 8 to 10
Electrical Parts List ..... 11 to 14
Exploded View ..... 15 to 16
Cabinet Assembly Parts List 17
Packing Assembly Parts List 18
Packing Method View 18

Additional Schematic Diagram inserted.

Specifications

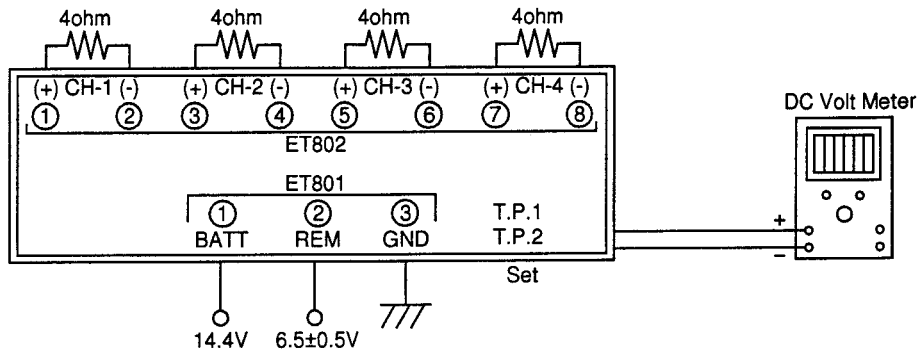
Power Output (20Hz ~20Hz)	4ohm-4channel, 0.2% T.H.D. : 50W
	2ohm-4channel, 1% T.H.D. : 60W
	4ohm-2channel, 1% T.H.D., BTL : 120W
S/N Ratio (50W/ch/4ohm, Input shorted)	100dB
Input Sensitivity	SP. 50W/ch Output, CW : 0.2V±3dB
	Center : 1V±3dB
	CCW : 4V±3dB
	PRE. 1V Output, Center : 1V+1, -3dB
Input Impedance	27±6k ohm
Ferquency Response (-1dB at 1kHz)	20Hz~40kHz
Current Drain	No Signal : 1.5A
	4ohm-4channel, 10% T.H.D. : 35A
	2ohm-4channel, 10% T.H.D. : 55A
Channel Separation (Input Shorted, at 1kHz)	55dB
Fuse Requirement	30A (For Battery Line)
Power Source	DC14.4V (11 ~16V)
Semiconductors	16IC's, 62Transistors, 20Diodes, 4Zener Diodes, 8FET's
Dimensions (W×H×D)	240×53×270mm
Weight	3.2kg

NOTE : Due to Continuing product improvement, specifications and designs are subject to change without notice.

Adjustment Procedures

(1) First, rote VR501 fully clock wise.
調整を始める前にVR501を時計方向いっぱいに回転させる。

(2) Connection



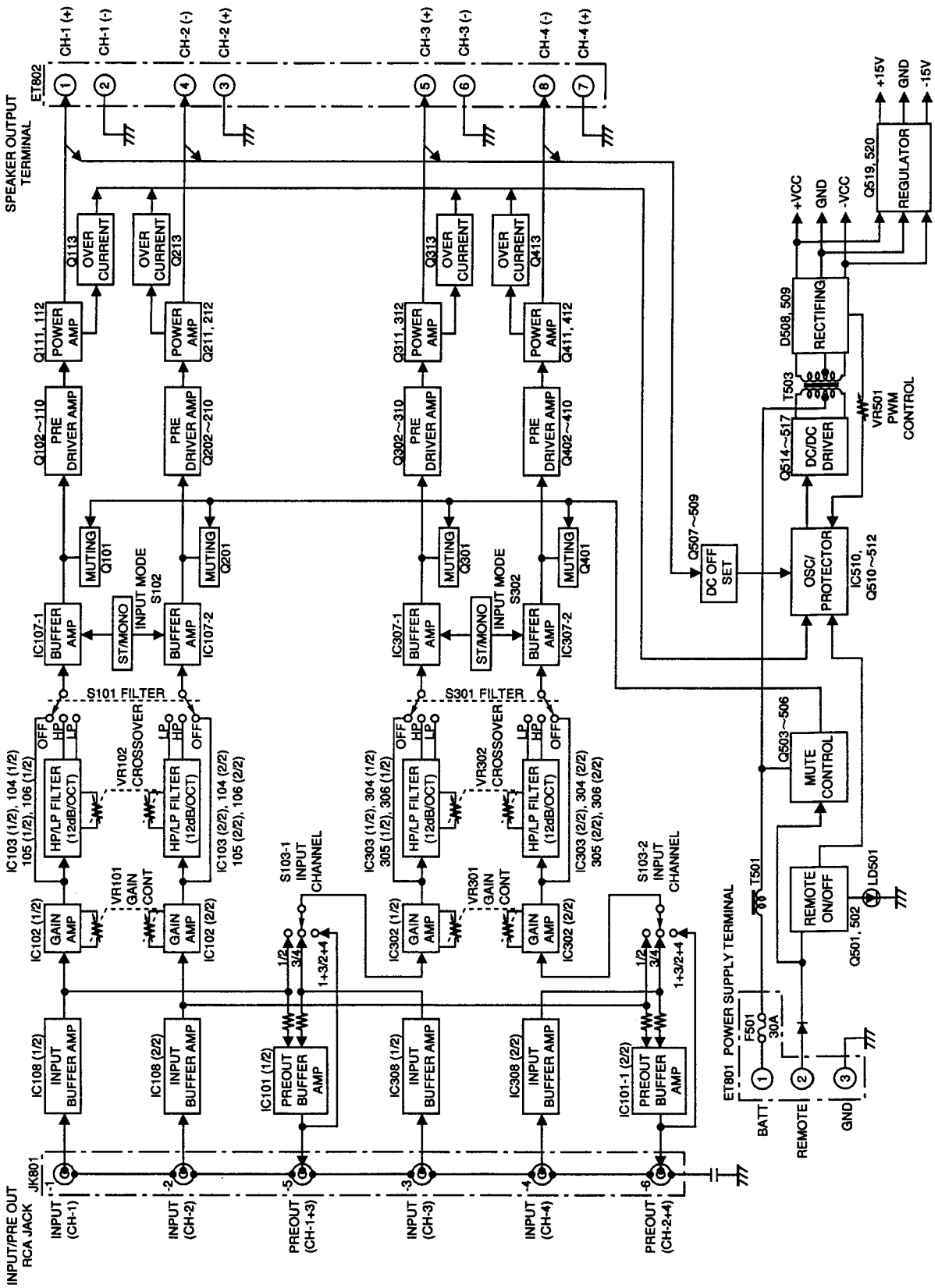
(3) Adjustment Procedures

Step	Test Point	Adjustment
1	T.P.1 T.P.2	Adjust VR501 for 52±0.5V between T.P.1 and T.P.2. T.P.1, T.P.2間の電圧が52±0.5Vになる様にVR501を調整する。

NOTE : For the Adjutment Parts (VR501) and Test Points, refer to the Parts Layout on P.C.Boards and Wiring Diagram.

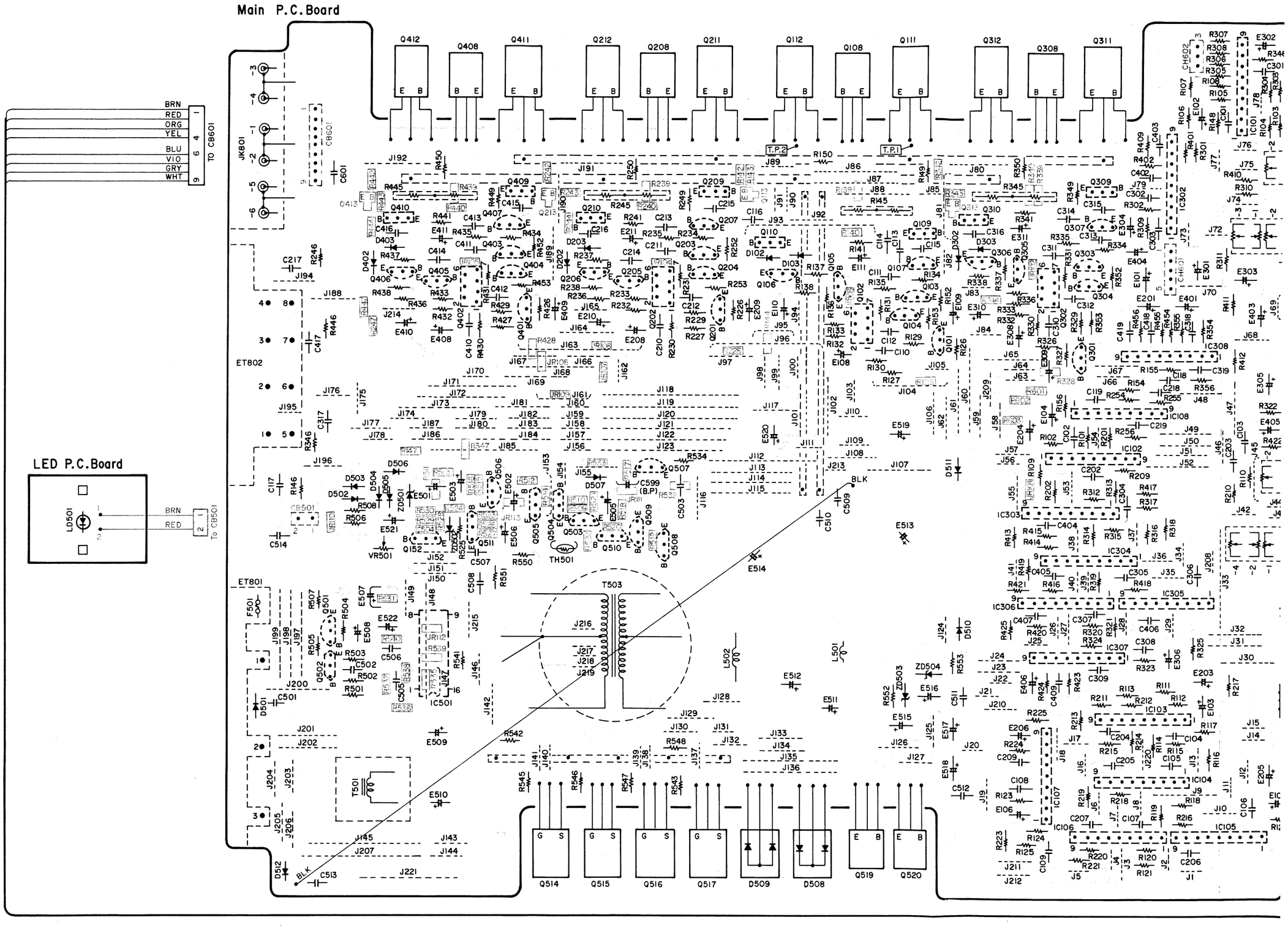
※ 調整部品（VR501）及びテストポイントの詳細については、
「Parts Layout on P.C.Boards and Wiring Diagram」を参照願います。

Block Diagram

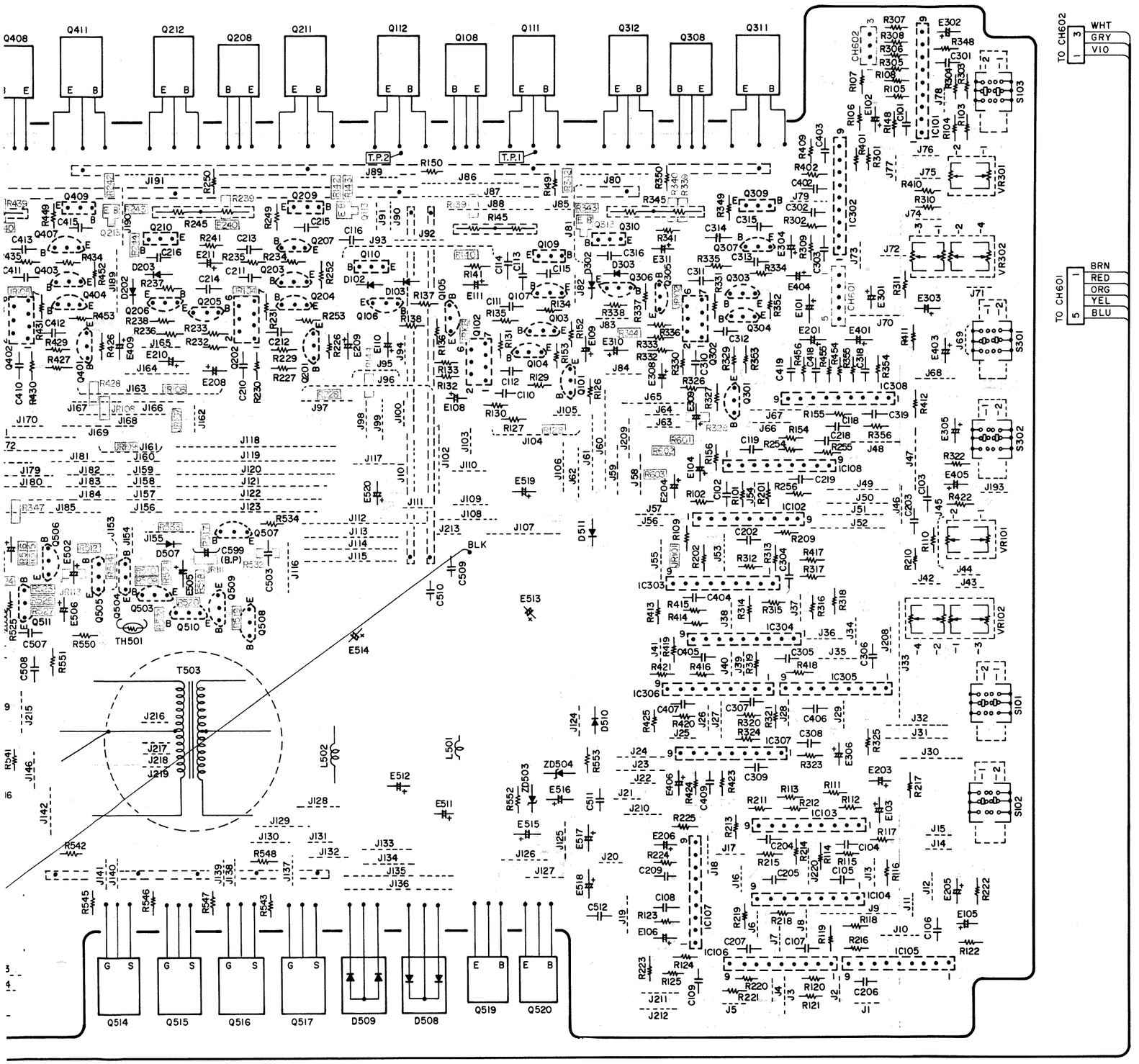


Parts Layout on P.C.Boards and Wiring Diagram

All P.C.Boards viewed from soldered side.



1 **All P.C.Boards viewed from soldered side.**



Blue Pattern : Foil Side Pattern

MRV-F300S MRV-F300S

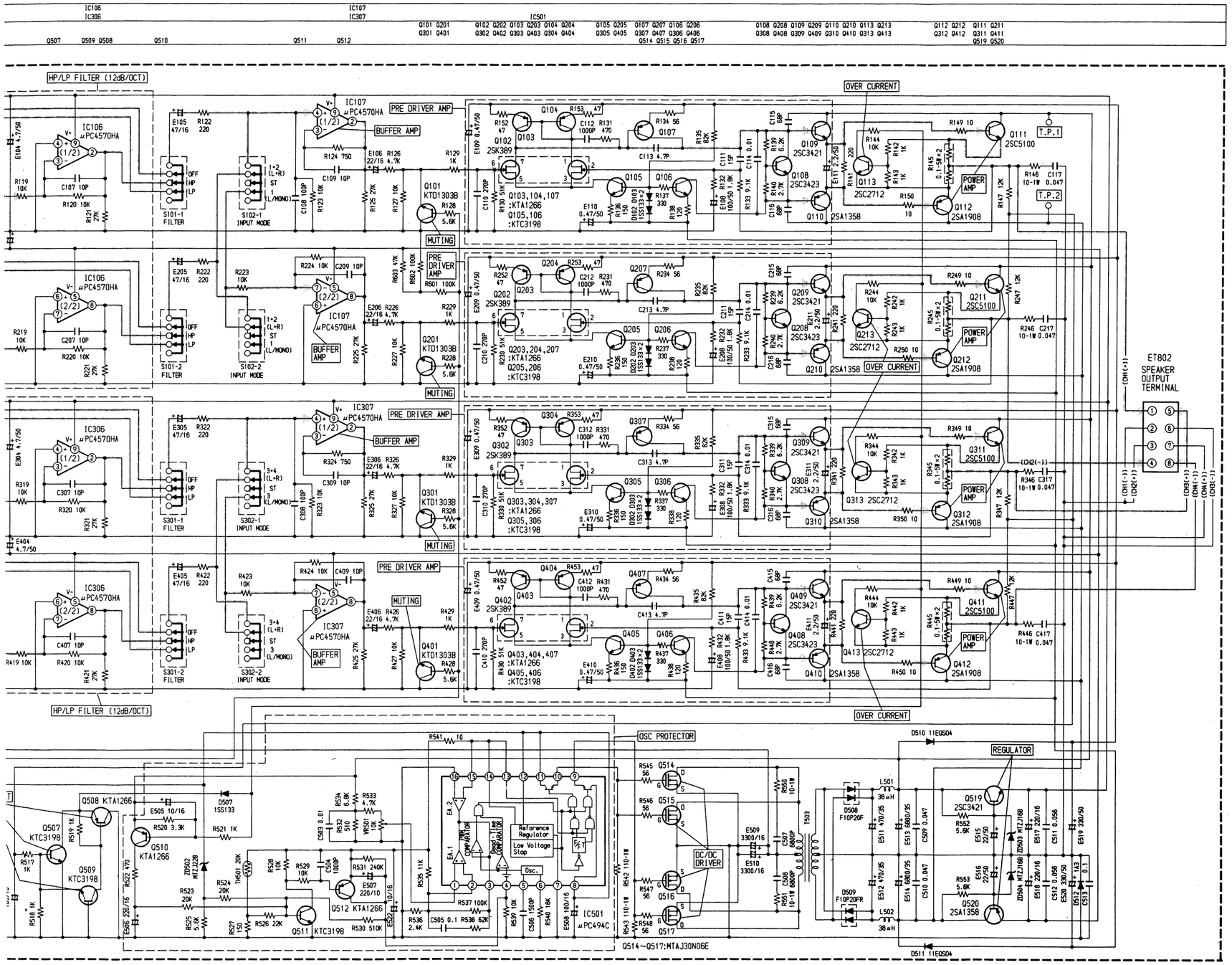
Schematic Diagram

IC	IC101(1/2) IC101(2/2) IC308(2/2)	IC108 IC308(1/2)	IC102 IC302	IC103 IC303	IC104 IC304	IC105 IC305	IC106 IC306	IC107 IC307	IC501
Transistor (Q)	Q502	Q501	Q503	Q504 Q505 Q506	Q507	Q509 Q508	Q510	Q511	Q512	Q101 Q201 Q301 Q401	Q102 Q202 Q302 Q402 Q103 Q203 Q303 Q403 Q104 Q204 Q304 Q404	Q105 Q205 Q305 Q405	Q107 Q207 Q307 Q407 Q106 Q206 Q306 Q406 Q514 Q515 Q516 Q517	Q108 Q208 Q308 Q408 Q109 Q209 Q309 Q409 Q110 Q210 Q310 Q410 Q113 Q213 Q313 Q413	Q112 Q312

Main P.C.Board

PRE OUT BUFFER AMP
IC101 μPC4570HA
INPUT BUFFER AMP
IC108 μPC4570HA
GAIN AMP
IC102 μPC4570HA
IC103 μPC4570HA
IC104 μPC4570HA
IC105 μPC4570HA
IC106 μPC4570HA
IC107 μPC4570HA
IC302 μPC4570HA
IC303 μPC4570HA
IC304 μPC4570HA
IC305 μPC4570HA
IC306 μPC4570HA
IC307 μPC4570HA
IC308 μPC4570HA
S103-1 INPUT CHANNEL 1/2 3/4 1+3/2+4
S103-2 INPUT CHANNEL 1/2 3/4 1+3/2+4
HP/LP FILTER (12dB/OCT)
CROSSOVER
S101-1 FILTER
S101-2 FILTER
S102-1 INPUT MODE
S102-2 INPUT MODE
S301-1 FILTER
S301-2 FILTER
S302-1 INPUT MODE
S302-2 INPUT MODE
PRE DRIVER AMP
BUFFER AMP
MUTING
OVER CURRENT
Q101 KTD1303B
Q201 KTD1303B
Q301 KTD1303B
Q401 KTD1303B
Q102 2SK389
Q202 2SK389
Q302 2SK389
Q402 2SK389
Q103,104,107 :KTA1266
Q105,106 :KTC3198
Q203,204,207 :KTA1266
Q205,206 :KTC3198
Q303,304,307 :KTA1266
Q305,306 :KTC3198
Q403,404,407 :KTA1266
Q405,406 :KTC3198
Q109 2SC3421
Q209 2SC3421
Q309 2SC3421
Q409 2SC3421
Q108 2SC3423
Q208 2SC3423
Q308 2SC3423
Q408 2SC3423
Q113 2SC2712
Q213 2SC2712
Q313 2SC2712
Q413 2SC2712
Q110 2SA1358
Q210 2SA1358
Q310 2SA1358
Q410 2SA1358
JK801 INPUT/PRE OUT RCA JACK
INPUT (CH-1)
INPUT (CH-2)
INPUT (CH-3)
INPUT (CH-4)
PRE OUT (CH-1+3)
PRE OUT (CH-2+4)
D601 D602
T501
MUTE CONTROL
Q501 KTA1266
Q502 KRC101M
Q503 KTA1266
Q504 KRA104M
Q505 KRC104M
Q506 KTC3198
Q507 KTC3198
Q508 KTA1266
Q509 KTC3198
Q510 KTA1266
Q511 KTC3198
Q512 KTA1266
DC OFF SET
REMOTE ON/OFF
ET801 POWER SUPPLY TERMINAL
BATT
REMOTE
GND
LED P.C.Board
LD501 SEL2510C
OSC PROTECTOR
Reference Regulator
Low Voltage Stop
Osc.
DC/DC DRIVER
IC501 μPC494C
Q514~Q517:NTAJ30N06E
D510 11EQSC
D511 11EQSC
D508 F10P20F
D509 F10P20FR

A | B | C | D | E | F | G | H



IC101, 102, 103, 104, 105, 106, 107, 108, 302, 303, 304, 305, 306, 307, 308

1	15V
2-4	0V
5	-15V
6-8	0V
9	15V

IC501

1, 2	0.98V
3	3.8V
4	0.26V
5	1.7V
6	3.8V
7	0V
8	14.3V
9, 10	0.8V
11, 12	14.3V
13-15	5V
16	0V

Q102, 202, 302, 402

1	25V
2	0V
3	0.1V
4	NC
5	0.1V
6	0V
7	25V

	S	D	G
Q514	0V	14.4V	0.8V
Q515	0V	14.4V	0.8V
Q516	0V	14.4V	0.8V
Q517	0V	14.4V	0.8V

	E	C	B	MODE		E	C	B	MODE
Q101	0V	0V	-9.8V/0.7V	MUTE OFF/ON	Q309	0.6V	26V	1.1V	
Q103	25.6V	25V	25V		Q310	-0.6V	-26V	-1.1V	
Q104	25.6V	25V	25V		Q311	0V	26V	0.6V	
Q105	-25.3V	0.1V	-24.6V		Q312	0V	-26V	-0.6V	
Q106	-25.3V	-1.1V	-24.6V		Q313	0V	26V	0V	
Q107	25.5V	1.1V	25V		Q401	0V	0V	-9.8V/0.7V	MUTE OFF/ON
Q108	-1.1V	1.1V	-0.6V		Q403	25.6V	25V	25V	
Q109	0.6V	26V	1.1V		Q404	25.6V	25V	25V	
Q110	-0.6V	-26V	-1.1V		Q405	-25.3V	0.1V	-24.6V	
Q111	0V	26V	0.6V		Q406	-25.3V	-1.1V	-24.6V	
Q112	0V	-26V	-0.6V		Q407	25.5V	1.1V	25V	
Q113	0V	26V	0V		Q408	-1.1V	1.1V	-0.6V	
Q201	0V	0V	-9.8V/0.7V	MUTE OFF/ON	Q409	0.6V	26V	1.1V	
Q203	25.6V	25V	25V		Q410	-0.6V	-26V	-1.1V	
Q204	25.6V	25V	25V		Q411	0V	26V	0.6V	
Q205	-25.3V	0.1V	-24.6V		Q412	0V	-26V	-0.6V	
Q206	-25.3V	-1.1V	-24.6V		Q414	0V	26V	0V	
Q207	25.5V	1.1V	25V		Q501	14.4V	14.3V	13.5V	
Q208	-1.1V	1.1V	-0.6V		Q502	0V	0V	2.8V	
Q209	0.6V	26V	1.1V		Q503	6.7V	0V/6.6V	6.7V/6.1V	MUTE OFF/ON
Q210	-0.6V	-26V	-1.1V		Q504	14.4V	-9.8V/14.3V	14.2V/0V	MUTE OFF/ON
Q211	0V	26V	0.6V		Q505	0V	14.2V/0V	0V/2.6V	MUTE OFF/ON
Q212	0V	-26V	-0.6V		Q506	0V	0V	0.6V/0V	MUTE OFF/ON
Q213	0V	26V	0V		Q507	0V	25.7V/0V	0V/0.6V	PROTECT OFF/ON
Q301	0V	0V	-9.8V/0.7V	MUTE OFF/ON	Q508	25.7V/0V	0V	25.7V/24.8V	PROTECT OFF/ON
Q303	25.6V	25V	25V		Q509	0V/-0.6V	25.7V/0V	0V	PROTECT OFF/ON
Q304	25.6V	25V	25V		Q510	26V	0V/25.8V	26V/25.4V	PROTECT OFF/ON
Q305	-25.3V	0.1V	-24.6V		Q511	0V	5V/0V	0V/0.6V	PROTECT OFF/ON
Q306	-25.3V	-1.1V	-24.6V		Q512	5V	0V/4.9V	5V/4.3V	PROTECT OFF/ON
Q307	25.5V	1.1V	25V		Q519	15V	26V	15.7V	
Q308	-1.1V	1.1V	-0.6V		Q520	-15V	-26V	-15.7V	

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions : No Signal Input

NOTES:

1. All resistance values are in ohms. K= 1,000
2. All capacitance values are in microfarads. P= 1/1,000,000

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : μF=microfarads,pF=picofarads

Abbreviations

RES.= Resistor	CAP.= Capacitor
C.F.= Carbon Film	ELY.= Electrolytic
M.F.= Metal Film	CER.= Ceramic
M.O.= Metal Oxide Film	MYL.= Mylar
M.P.= Metal Plate	TAN.= Tantalum
TR. = Transistor	POLY.= Polystyrol
TRANS.= Transformer	PP. = Polypropylene
CP. = Chip	PLT.= Polyethylene
	PF. = Polyester Film

Symbol No.	Part No.	Description
Main P.C.Board		
IC's		
IC101	51E03808S01	μPC4570HA
IC102	51E03808S01	μPC4570HA
IC103	51E03808S01	μPC4570HA
IC104	51E03808S01	μPC4570HA
IC105	51E03808S01	μPC4570HA
IC106	51E03808S01	μPC4570HA
IC107	51E03808S01	μPC4570HA
IC108	51E03808S01	μPC4570HA
IC302	51E03808S01	μPC4570HA
IC303	51E03808S01	μPC4570HA
IC304	51E03808S01	μPC4570HA
IC305	51E03808S01	μPC4570HA
IC306	51E03808S01	μPC4570HA
IC307	51E03808S01	μPC4570HA
IC308	51E03808S01	μPC4570HA
IC501	51E23413S01	μPC494C
Transistors		
Q101	48E23765S01	KTD1303B
Q102	48E23418S01	FET, 2SK389
Q103	48E23760S01	KTA1266
Q104	48E23760S01	KTA1266
Q105	48E23761S01	KTC3198
Q106	48E23761S01	KTC3198
Q107	48E23760S01	KTA1266
Q108	48E23414S01	2SC3423
Q109	48E04071S01	2SC3421
Q110	48E04070S01	2SA1358
Q111	48E22791S01	2SC5100
Q112	48E22792S01	2SA1908
Q113	48E20148S01	CP., 2SC2712
Q201	48E23765S01	KTD1303B
Q202	48E23418S01	FET, 2SK389
Q203	48E23760S01	KTA1266
Q204	48E23760S01	KTA1266
Q205	48E23761S01	KTC3198
Q206	48E23761S01	KTC3198
Q207	48E23760S01	KTA1266
Q208	48E23414S01	2SC3423
Q209	48E04071S01	2SC3421
Q210	48E04070S01	2SA1358
Q211	48E22791S01	2SC5100
Q212	48E22792S01	2SA1908
Q213	48E20148S01	CP., 2SC2712
Q301	48E23765S01	KTD1303B
Q302	48E23418S01	FET, 2SK389
Q303	48E23760S01	KTA1266
Q304	48E23760S01	KTA1266
Q305	48E23761S01	KTC3198
Q306	48E23761S01	KTC3198
Q307	48E23760S01	KTA1266
Q308	48E23414S01	2SC3423
Q309	48E04071S01	2SC3421
Q310	48E04070S01	2SA1358
Q311	48E22791S01	2SC5100
Q312	48E22792S01	2SA1908
Q313	48E20148S01	CP., 2SC2712
Q401	48E23765S01	KTD1303B
Q402	48E23418S01	FET, 2SK389
Q403	48E23760S01	KTA1266
Q404	48E23760S01	KTA1266
Q405	48E23761S01	KTC3198
Q406	48E23761S01	KTC3198
Q407	48E23760S01	KTA1266
Q408	48E23414S01	2SC3423
Q409	48E04071S01	2SC3421
Q410	48E04070S01	2SA1358
Q411	48E22791S01	2SC5100
Q412	48E22792S01	2SA1908
Q413	48E20148S01	CP., 2SC2712
Q501	48E23760S01	KTA1266
Q502	48E23762S01	KRC101M
Q503	48E23760S01	KTA1266
Q504	48E23764S01	KRA104M
Q505	48E23763S01	KRC104M
Q506	48E23761S01	KTC3198
Q507	48E23761S01	KTC3198
Q508	48E23760S01	KTA1266
Q509	48E23761S01	KTC3198

Symbol No.	Part No.	Description
Q510	48E23760S01	KTA1266
Q511	48E23761S01	KTC3198
Q512	48E23760S01	KTA1266
Q514	48E23769S01	FET, MTAJ30N06E
Q515	48E23769S01	FET, MTAJ30N06E
Q516	48E23769S01	FET, MTAJ30N06E
Q517	48E23769S01	FET, MTAJ30N06E
Q519	48E04071S01	2SC3421
Q520	48E04070S01	2SA1358

Diodes

D102	48E21188S01	1SS133
D103	48E21188S01	1SS133
D202	48E21188S01	1SS133
D203	48E21188S01	1SS133
D302	48E21188S01	1SS133
D303	48E21188S01	1SS133
D402	48E21188S01	1SS133
D403	48E21188S01	1SS133
D501	48E23768S01	1A3
D502	48E23768S01	1A3
D503	48E21188S01	1SS133
D504	48E21188S01	1SS133
D505	48E21188S01	1SS133
D506	48E23768S01	1A3
D507	48E21188S01	1SS133
D508	48E23770S01	F10P20F
D509	48E23771S01	F10P20FR
D510	48E20779S01	11EQS04
D511	48E20779S01	11EQS04
D512	48E23768S01	1A3
ZD501	48E23767S01	Zener, MTZJ6.8C
ZD502	48E23396S01	Zener, MTZJ22B
ZD503	48E23766S01	Zener, MTZJ16B
ZD504	48E23766S01	Zener, MTZJ16B

Transformers / Thermistor

T501	25E06342S01	Choke
T503	24E23777S01	DC/DC
TH501	48E11405S01	Thermistor, 20K ohm

Coils

L501	24E22005S01	38μH
L502	24E22005S01	38μH

Switches

S101	40E23776S01	Slide, SSAF123NAE (FILTER)
S102	40E23776S01	Slide, SSAF123NAE (INPUT MODE)
S103	40E23776S01	Slide, SSAF123NAE (INPUT CHANNEL)
S301	40E23776S01	Slide, SSAF123NAE (FILTER)
S302	40E23776S01	Slide, SSAF123NAE (INPUT MODE)

Capacitors

C101	08E21461S01	CER., 10pF
E101	23E21187S01	ELY., 10μF / 50V
C102	08E21987S01	CER., 33pF
E102	23E20773S01	ELY., 10μF / 16V
C103	08E21461S01	CER., 10pF
E103	23E20773S01	ELY., 10μF / 16V
C104	21E06640S01	CER., 100pF
E104	23E21995S01	ELY., 4.7μF / 50V
C105	08E23758S01	POLY., 0.15μF
E105	23E21149S01	ELY., 47μF / 16V
C106	08E23758S01	POLY., 0.15μF
E106	23E21150S01	ELY., 22μF / 16V
C107	08E21461S01	CER., 10pF
C108	21E06640S01	CER., 100pF
E108	23E23751S01	ELY., 100μF / 50V
C109	08E21461S01	CER., 10pF
E109	23E21460S01	ELY., 0.47μF / 50V
C110	08E04860S02	CER., 270pF
E110	23E21460S01	ELY., 0.47μF / 50V
C111	21E07286S03	CER., 15pF
E111	23E21151S01	ELY., 2.2μF / 50V
C112	08E21991S01	CER., 1000pF
C113	08E23759S01	CER., 4.7pF
C114	08E23754S01	POLY., 0.01μF
C115	08E21988S01	CER., 68pF
C116	08E21988S01	CER., 68pF
C117	08E23755S01	POLY., 0.047μF
C118	08E21461S01	CER., 10pF
C119	08E21461S01	CER., 10pF
E201	23E21187S01	ELY., 10μF / 50V
C202	08E21987S01	CER., 33pF
C203	08E21461S01	CER., 10pF
E203	23E20773S01	ELY., 10μF / 16V
C204	21E06640S01	CER., 100pF
E204	23E21995S01	ELY., 4.7μF / 50V
C205	08E23758S01	POLY., 0.15μF
E205	23E21149S01	ELY., 47μF / 16V
C206	08E23758S01	POLY., 0.15μF
E206	23E21150S01	ELY., 22μF / 16V
C207	08E21461S01	CER., 10pF
E208	23E23751S01	ELY., 100μF / 50V

Symbol No.	Part No.	Description
C209	08E21461S01	CER., 10pF
E209	23E21460S01	ELY., 0.47µF / 50V
C210	08E04860S02	CER., 270pF
E210	23E21460S01	ELY., 0.47µF / 50V
C211	21E07286S03	CER., 15pF
E211	23E21151S01	ELY., 2.2µF / 50V
C212	08E21991S01	CER., 1000pF
C213	08E23759S01	CER., 4.7pF
C214	08E23754S01	POLY., 0.01µF
C215	08E21988S01	CER., 68pF
C216	08E21988S01	CER., 68pF
C217	08E23755S01	POLY., 0.047µF
C218	08E21461S01	CER., 10pF
C219	08E21461S01	CER., 10pF
C301	08E21461S01	CER., 10pF
E301	23E21187S01	ELY., 10µF / 50V
C302	08E21987S01	CER., 33pF
E302	23E20773S01	ELY., 10µF / 16V
C303	08E21461S01	CER., 10pF
E303	23E20773S01	ELY., 10µF / 16V
C304	21E06640S01	CER., 100pF
E304	23E21995S01	ELY., 4.7µF / 50V
C305	08E23758S01	POLY., 0.15µF
E305	23E21149S01	ELY., 47µF / 16V
C306	08E23758S01	POLY., 0.15µF
E306	23E21150S01	ELY., 22µF / 16V
C307	08E21461S01	CER., 10pF
C308	21E06640S01	CER., 100pF
E308	23E23751S01	ELY., 100µF / 50V
C309	08E21461S01	CER., 10pF
E309	23E21460S01	ELY., 0.47µF / 50V
C310	08E04860S02	CER., 270pF
E310	23E21460S01	ELY., 0.47µF / 50V
C311	21E07286S03	CER., 15pF
E311	23E21151S01	ELY., 2.2µF / 50V
C312	08E21991S01	CER., 1000pF
C313	08E23759S01	CER., 4.7pF
C314	08E23754S01	POLY., 0.01µF
C315	08E21988S01	CER., 68pF
C316	08E21988S01	CER., 68pF
C317	08E23755S01	POLY., 0.047µF
C318	08E21461S01	CER., 10pF
C319	08E21461S01	CER., 10pF
E401	23E21187S01	ELY., 10µF / 50V
C402	08E21987S01	CER., 33pF
C403	08E21461S01	CER., 10pF
E403	23E20773S01	ELY., 10µF / 16V
C404	21E06640S01	CER., 100pF
E404	23E21995S01	ELY., 4.7µF / 50V

Symbol No.	Part No.	Description
C405	08E23758S01	POLY., 0.15µF
E405	23E21149S01	ELY., 47µF / 16V
C406	08E23758S01	POLY., 0.15µF
E406	23E21150S01	ELY., 22µF / 16V
C407	08E21461S01	CER., 10pF
E408	23E23751S01	ELY., 100µF / 50V
C409	08E21461S01	CER., 10pF
E409	23E21460S01	ELY., 0.47µF / 50V
C410	08E04860S02	CER., 270pF
E410	23E21460S01	ELY., 0.47µF / 50V
C411	21E07286S03	CER., 15pF
E411	23E21151S01	ELY., 2.2µF / 50V
C412	08E21991S01	CER., 1000pF
C413	08E23759S01	CER., 4.7pF
C414	08E23754S01	POLY., 0.01µF
C415	08E21988S01	CER., 68pF
C416	08E21988S01	CER., 68pF
C417	08E23755S01	POLY., 0.047µF
C418	08E21461S01	CER., 10pF
C419	08E21461S01	CER., 10pF
C501	08E23758S01	POLY., 0.15µF
E501	23E20773S01	ELY., 10µF / 16V
C502	08E21991S01	CER., 1000pF
E502	23E20773S01	ELY., 10µF / 16V
C503	08E23754S01	POLY., 0.01µF
E503	23E20773S01	ELY., 10µF / 16V
C504	08E23750S01	CP., 1000pF
C505	08E23757S01	POLY., 0.1µF
E505	23E20773S01	ELY., 10µF / 16V
C506	08E23752S01	POLY., 1500pF
E506	23E21996S01	ELY., 220µF / 16V
C507	08E23753S01	POLY., 6800pF
E507	23E20800S01	ELY., 220µF / 10V
C508	08E23753S01	POLY., 6800pF
E508	23E20774S01	ELY., 100µF / 16V
C509	08E23755S01	POLY., 0.047µF
E509	23E22001S01	ELY., 3300µF / 16V
C510	08E23755S01	POLY., 0.047µF
E510	23E22001S01	ELY., 3300µF / 16V
C511	08E23756S01	POLY., 0.056µF
E511	23E08302S01	ELY., 470µF / 35V
C512	08E23756S01	POLY., 0.056µF
E512	23E08302S01	ELY., 470µF / 35V
C513	08E23757S01	POLY., 0.1µF
E513	23E23773S01	ELY., 6800µF / 35V
C514	08E21990S01	CER., 180pF
E514	23E23773S01	ELY., 6800µF / 35V
E515	23E22188S01	ELY., 22µF / 50V
E516	23E22188S01	ELY., 22µF / 50V

Symbol No.	Part No.	Description
E517	23E21996S01	ELY., 220µF / 16V
E518	23E21996S01	ELY., 220µF / 16V
E519	23E23772S01	ELY., 330µF / 50V
E520	23E23772S01	ELY., 330µF / 50V
E521	23E21994S01	ELY., 3.3µF / 50V
E522	23E20773S01	ELY., 10µF / 16V
C599	23E21997S01	ELY., (B.P) 100µF / 10V
C601	08E21991S01	CER., 1000pF

Resistors

(All resistors are chip 1/10W±5% unless otherwise noted.)

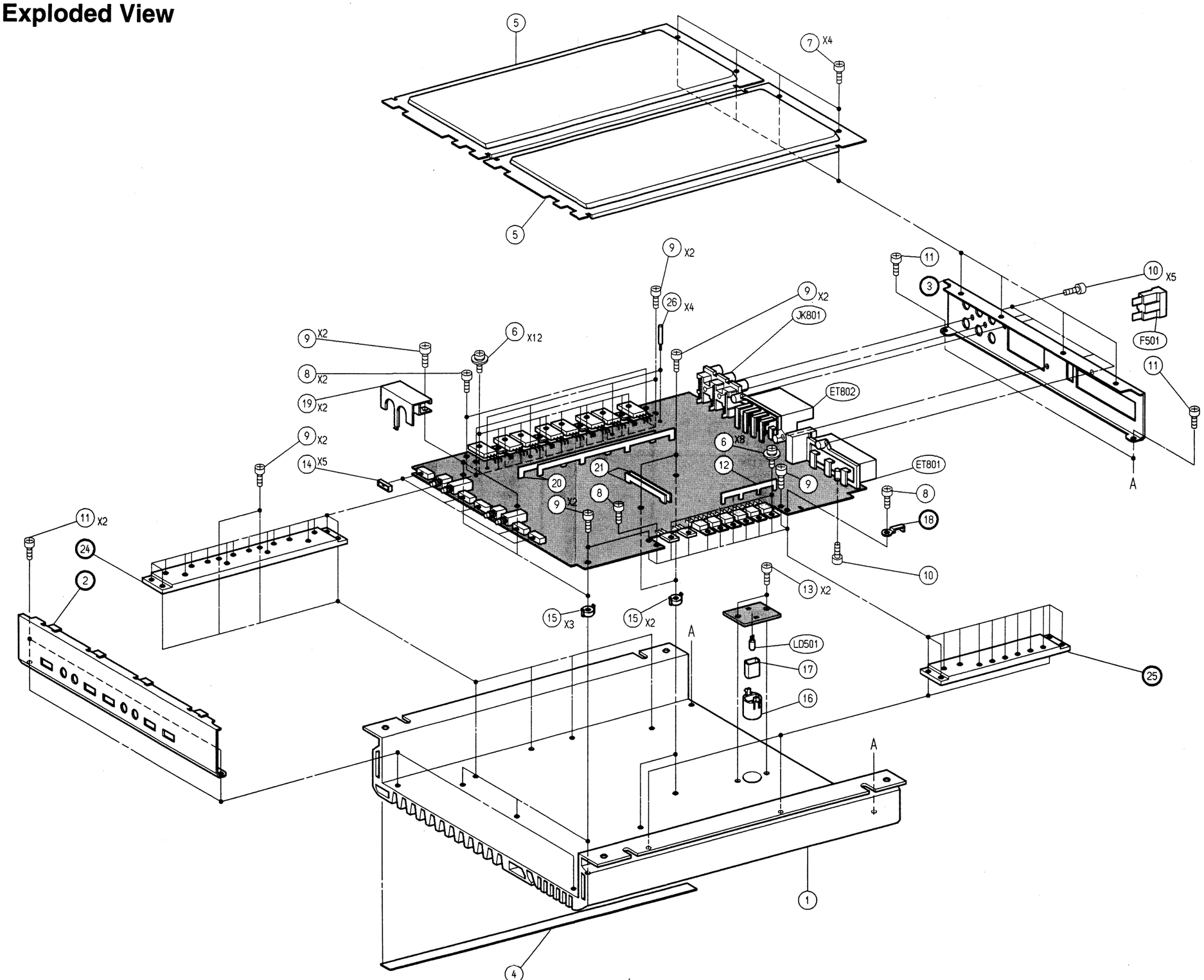
R128	06E08433S25	5.6K ohm
R139	06E08433S09	6.2K ohm
R140	06E08433S06	2.7K ohm
R142	06E08433S03	1K ohm
R143	06E08433S03	1K ohm
R144	06E08433S10	10K ohm
R145	17E09460S01	Cement, 0.1 ohm 5W ×2
R146	06E21985S01	M.F., 10 ohm 1W
R147	06E08433S45	12K ohm
R228	06E08433S25	5.6K ohm
R239	06E08433S09	6.2K ohm
R240	06E08433S06	2.7K ohm
R242	06E08433S03	1K ohm
R243	06E08433S03	1K ohm
R244	06E08433S10	10K ohm
R245	17E09460S01	Cement, 0.1 ohm 5W ×2
R246	06E21985S01	M.F., 10 ohm 1W
R247	06E08433S45	12K ohm
R328	06E08433S25	5.6K ohm
R339	06E08433S09	6.2K ohm
R340	06E08433S06	2.7K ohm
R342	06E08433S03	1K ohm
R343	06E08433S03	1K ohm
R344	06E08433S10	10K ohm
R345	17E09460S01	Cement, 0.1 ohm 5W ×2
R346	06E21985S01	M.F., 10 ohm 1W
R347	06E08433S45	12K ohm
R428	06E08433S25	5.6K ohm
R439	06E08433S09	6.2K ohm
R440	06E08433S06	2.7K ohm
R442	06E08433S03	1K ohm
R443	06E08433S03	1K ohm
R444	06E08433S10	10K ohm
R445	17E09460S01	Cement, 0.1 ohm 5W ×2
R446	06E21985S01	M.F., 10 ohm 1W
R447	06E08433S45	12K ohm
R509	06E08433S29	100K ohm
R510	06E08433S07	4.7K ohm

Symbol No.	Part No.	Description
R511	06E08433S29	100K ohm
R512	06E08433S44	2K ohm
R513	06E08433S44	2K ohm
R514	06E08433S29	100K ohm
R515	06E08433S55	680K ohm
R516	06E20117S01	1M ohm
R517	06E08433S03	1K ohm
R518	06E08433S03	1K ohm
R519	06E08433S03	1K ohm
R520	06E08433S21	3.3K ohm
R521	06E08433S03	1K ohm
R522	06E20498S01	470 ohm
R523	06E08433S65	20K ohm
R524	06E08433S65	20K ohm
R526	06E08433S12	22K ohm
R527	06E08433S59	150 ohm
R528	06E08433S10	10K ohm
R529	06E08433S10	10K ohm
R530	06E08433S74	510K ohm
R531	06E21980S01	240K ohm
R532	06E08433S69	510 ohm
R533	06E08433S07	4.7K ohm
R535	06E08433S51	11K ohm
R536	06E08433S16	2.4K ohm
R537	06E08433S29	100K ohm
R538	06E08433S73	62K ohm
R539	06E08433S10	10K ohm
R540	06E08433S11	18K ohm
R542	06E21986S01	M.F., 110 ohm 1W
R543	06E21986S01	M.F., 110 ohm 1W
R550	06E21985S01	M.F., 10 ohm 1W
R551	06E21985S01	M.F., 10 ohm 1W
R601	06E08433S29	100K ohm
R602	06E08433S29	100K ohm
R603	06E08433S28	47K ohm
VR101	18E23775S01	Volume, 50K ohm ×2 (GAIN)
VR102	18E23774S01	Volume, 20K ohm ×4 (CROSSOVER)
VR301	18E23775S01	Volume, 50K ohm ×2 (GAIN)
VR302	18E23774S01	Volume, 20K ohm ×4 (CROSSOVER)
VR501	18E21381S01	Variable, 10K ohm

Miscellaneous

ET801	01E22007S01	POWER SUPPLY TERMINAL
ET802	09E23779S01	SPEAKER OUTPUT TERMINAL
F501	65E21528S01	Fuse, Auto 30A (For Battery Line)
JK801	09E23778S01	INPUT/PRE OUT RCA JACK
LD501	48E23780S01	LED, SEL2510C (GRN)

Exploded View



Cabinet Assembly Parts List

NOTE:No parts number on parts list are not supplied.

Symbol No.	Index	Part No.	Description
1	5-E	07E23800S01	Main Heat Sink
4	5-D	45E23801S01	Name Plate
5		15E22742S01	Cover, Bottom
6		03E08304S01	Screw, W/Double Washer (M3X8.5)
7	1-E	03E23802S01	Screw, Bind (M3X5)
8		03E08429S02	Screw, Bind (M3X6)
9		03E07234S01	Screw, Bind (M3X12)
10		03E23371S01	Screw, Pan (M3X8)
11		03E22345S01	Screw, Bind (M3X5)
12	3-E	45E23803S01	Bus Bar (FET)
13	4-E	03E06492S02	Screw, Bind (M3X5)
14	3-C	15E21973S01	Cover, Switch
15	4-D	43E21451S01	Support P.C.Board
16	4-E	43E23804S01	Holder, LED
17	4-E	15E23805S01	Cover, LED
19	3-C	29E23806S01	Lag, GND
20	3-D	45E23807S01	Bus Bar (A)
21	3-D	45E22372S01	Bus Bar (JD)
26	2-D	09E21408S01	Lug, Style

Symbol No.	Index	Part No.	Description

Packing Assembly Parts List

Symbol No.	Part No.	Description
	101-1	03E22368S01	Screw, Tapping (M4 ×14)
	101-2	65E21528S01	Fuse, Auto 30A
○	102	68P80079W97	Owner's Manual
△	102	68P81402W38	Owner's Manual
□	102	68P81402W39	Owner's Manual
△	103-1	01E21979S01	Assy., Power Wire
□	103-1	01E21979S01	Assy., Power Wire

Symbol No.	Part No.	Description
△	103-2	28E21976S01	Remote Cord
□	103-2	28E21976S01	Remote Cord
□	103-3	01E22738S01	Assy., Speaker Wire

NOTE : ○ : For North American Model Only, △ : For General Foreign Model Only,
□ : For Japanese Model Only, Others : Common.

Packing Method View